



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/302,407	04/30/1999	FRANK W. FABIAN	57472/3	6840

7590 04/16/2004

McCarthy Tetrault LLP
Suite 4700, P.O. Box 48
Toronto Dominion Bank Tower
Toronto, Ontario, M5K 1E6
CANADA

EXAMINER

HARVEY, DIONNE

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/302,407

Applicant(s)

FABIAN

Examiner

Dionne N Harvey

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-14, 16, 20-35 and 38-47 is/are allowed.
- 6) ☐ Claim(s) 15, 17-19, 36, 37 and 48-50 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the transition wall consisting of a truncated conically tapered section as recited in claim 37; "suspension fluid" of claim 43; and a clear depiction of the loudspeaker embodiment as recited in claim 47, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 17 recites "...said magnet extends away from said intermediate member...".

Art Unit: 2643

Page 21 of the Applicant's specification defines the "opposed member" as being indicative of the top plate. However, the Applicant's specification fails to clearly define that element in the magnetic structure, which is considered to be the "intermediate member" of the claim. What element of the magnetic structure is referred to in the Applicant's recitation of "intermediate member" ?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 15,17,36 and 37, as well as all claims dependent upon them, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 15 recites, "...wherein said pole piece includes said magnet."

Clarification is required.

b. Claim 17 recites the limitation "said distal end member" in line 9. There is insufficient antecedent basis for this limitation in the claim.

c. In lines 9-10, Claim 17 recites, "said distal end member has passages defined therethrough..." this is misdescriptive since according to the Applicant's specification and Drawings, the magnet's distal end is not provided with passages. Correction is required.

d. In lines 4-5, Claim 36 recites, "...a medial portion narrower than said distal end and a transition wall extending between said distal end and said medial

portion..." This is misdescriptive since, according to lines 1-2 on page 19 of the Applicant's specification, " Medial shoulder **156** forms a transition wall between outer wall **155** of narrow end **151** and outer wall **157** of distal end **152**."

Correction is required.

e. In lines 2-4, the Claim 37 recites, "...said transition wall is chosen from the set of transition walls consisting of: ...a truncated conically tapered section..."

However, According to page 20, line 21 of the Applicant's specification, "...magnet 212 is a truncated conical section." The Examiner does not understand how the transition wall may consist of a truncated conically tapered magnet. Clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Button (US 5,042,072) in view of Yamamoto (US 5,909,015).

Regarding claim 48, Button teaches a loudspeaker comprising: a magnetic flux path assembly and a co-operable diaphragm, said diaphragm having a voice coil(80) mounted thereto; said magnetic flux path assembly having a pole piece(140), and an opposed piece (120), said pole piece(140) and opposed piece (120) defining a gap

Art Unit: 2643

there-between; said voice coil being mounted for reciprocal movement in said gap; said pole piece (140) having a relief therein (see figure 2, figure 5 and figure 8) for conducting displaced air, said relief having an open side facing the voice coil. Button does not teach that the opposed piece has a relief formed therein for conducting displaced air.

In figures 1,3,4 and 5, Yamamoto teaches a loudspeaker comprising: a magnetic flux path assembly and a co-operable diaphragm (13), a voice coil (27), pole piece (39) and opposed piece (35), and wherein the opposed piece(35) has a relief (43-1)formed therein for conducting displaced air and said opposed piece (35) having an open side facing the voice coil (27). It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Button and Yamamoto, providing the opposed member of Button with an air transmitting relief, for the purpose of moving air into and out of the magnetic circuit thereby cooling the voice coil.

Regarding claim 49, In column 5, lines 7-16, Yamamoto teaches that the diaphragm is operable to urge air to be displaced in a opposite direction past the voice coil in said respective reliefs of said pole piece (see Button) and said opposed piece (35, 43-1).

Regarding claim 50, The combination of Button and Yamamoto inherently teaches that the diaphragm is operable to cause air to be displaced in said reliefs adjacent to both the inside and outside of the voice coil.

Art Unit: 2643

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne N Harvey whose telephone number is 703-305-1111. The examiner can normally be reached on 9-6:30 M-F and alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dionne Harvey


HUYEN LE
PRIMARY EXAMINER